



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L15-840-EM10W-XXX-DIM-UNV-OM-CS-XX\_ EM MODE ONLY.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.04

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 3-FEB-2021

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.

[LUMCAT] 8CR-TL-L15-840-EM10W-xxx-DIM-UNV-OM-CS-xx EM MODE ONLY

[LUMINAIRE] 8" DIA. SURFACE CYLINDER

[LAMP] One white LED

[\_SEARCH\_SOURCETYPE] LED

[\_SEARCH\_APPLICATION] Indoor, Architectural, Classroom, Commercial, Healthcare, Office, Downlight

[\_SEARCH\_MOUNTING] Surface

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1090
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	109
Total Luminaire Watts	10
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.58
Spacing Criterion (90-270)	0.58
Spacing Criterion (Diagonal)	0.68
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.50 ft (Diameter)
Luminous Width (90-270)	0.50 ft (Diameter)
Luminous Height	0.00 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1967	1967	1967
55	724	724	724
65	285	285	285
75	128	128	128
85	104	104	104

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## CANDELA TABULATION

	<u>0</u>
0.0	2205.834
0.5	2209.133
1.0	2215.729
1.5	2219.576
2.0	2228.921
2.5	2232.768
3.0	2239.364
3.5	2241.014
4.0	2236.066
4.5	2209.682
5.0	2183.298
5.5	2155.265
6.0	2110.192
6.5	2065.118
7.0	2017.297
7.5	1963.429
8.0	1900.766
8.5	1836.455
9.0	1769.944
9.5	1705.083
10.0	1645.169
10.5	1592.400
11.0	1546.778
11.5	1507.751
12.0	1469.274
12.5	1431.346
13.0	1395.068
13.5	1360.988
14.0	1330.207
14.5	1302.723
15.0	1277.988
15.5	1254.352
16.0	1231.266
16.5	1207.080
17.0	1182.345
17.5	1157.610
18.0	1135.073
18.5	1115.285
19.0	1094.947
19.5	1074.059
20.0	1050.973
20.5	1026.238
21.0	1000.953
21.5	975.118
22.0	947.635
22.5	921.251
23.0	893.217
23.5	864.634
24.0	834.952
24.5	805.270
25.0	776.137
25.5	747.005
26.0	720.071
26.5	694.236

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 8CR-TL-L15-840-EM10W-XXX-DIM-UNV-OM-CS-XX\_ EM MODE ONLY.IES****CANDELA TABULATION - (Cont.)**

27.0	670.050
27.5	646.964
28.0	626.077
28.5	607.388
29.0	589.798
29.5	572.758
30.0	551.321
30.5	524.497
31.0	493.716
31.5	459.856
32.0	425.501
32.5	390.927
33.0	356.352
33.5	320.074
34.0	283.246
34.5	249.661
35.0	217.395
35.5	186.944
36.0	157.646
36.5	131.427
37.0	109.934
37.5	94.818
38.0	86.683
38.5	81.187
39.0	75.690
39.5	69.863
40.0	63.652
40.5	57.056
41.0	50.735
41.5	44.853
42.0	39.851
42.5	35.894
43.0	32.815
43.5	30.452
44.0	28.473
44.5	26.879
45.0	25.395
45.5	24.131
46.0	22.921
46.5	21.822
47.0	20.723
47.5	19.678
48.0	18.634
48.5	17.590
49.0	16.545
49.5	15.611
50.0	14.731
50.5	13.852
51.0	13.027
51.5	12.203
52.0	11.378
52.5	10.664
53.0	9.949
53.5	9.289
54.0	8.685
54.5	8.135

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55.0	7.585
55.5	7.146
56.0	6.651
56.5	6.266
57.0	5.881
57.5	5.497
58.0	5.167
58.5	4.837
59.0	4.562
59.5	4.287
60.0	4.013
60.5	3.738
61.0	3.518
61.5	3.298
62.0	3.133
62.5	2.968
63.0	2.748
63.5	2.638
64.0	2.474
64.5	2.309
65.0	2.199
65.5	2.034
66.0	1.924
66.5	1.814
67.0	1.704
67.5	1.594
68.0	1.539
68.5	1.429
69.0	1.319
69.5	1.264
70.0	1.209
70.5	1.099
71.0	1.044
71.5	0.989
72.0	0.934
72.5	0.879
73.0	0.825
73.5	0.770
74.0	0.715
74.5	0.660
75.0	0.605
75.5	0.605
76.0	0.550
76.5	0.495
77.0	0.495
77.5	0.440
78.0	0.440
78.5	0.385
79.0	0.385
79.5	0.330
80.0	0.330
80.5	0.275
81.0	0.275
81.5	0.275
82.0	0.220
82.5	0.220

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83.0	0.220
83.5	0.165
84.0	0.165
84.5	0.165
85.0	0.165
85.5	0.110
86.0	0.110
86.5	0.110
87.0	0.110
87.5	0.110
88.0	0.055
88.5	0.055
89.0	0.055
89.5	0.055
90.0	0.055
90.5	0.000
91.0	0.000
91.5	0.000
92.0	0.000
92.5	0.000
93.0	0.000
93.5	0.000
94.0	0.000
94.5	0.000
95.0	0.000
95.5	0.000
96.0	0.000
96.5	0.000
97.0	0.000
97.5	0.000
98.0	0.000
98.5	0.000
99.0	0.000
99.5	0.000
100.0	0.000
100.5	0.000
101.0	0.000
101.5	0.000
102.0	0.000
102.5	0.000
103.0	0.000
103.5	0.000
104.0	0.000
104.5	0.000
105.0	0.000
105.5	0.000
106.0	0.000
106.5	0.000
107.0	0.000
107.5	0.000
108.0	0.000
108.5	0.000
109.0	0.000
109.5	0.000
110.0	0.000
110.5	0.000

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 8CR-TL-L15-840-EM10W-XXX-DIM-UNV-OM-CS-XX\_ EM MODE ONLY.IES****CANDELA TABULATION - (Cont.)**

111.0	0.000
111.5	0.000
112.0	0.000
112.5	0.000
113.0	0.000
113.5	0.000
114.0	0.000
114.5	0.000
115.0	0.000
115.5	0.000
116.0	0.000
116.5	0.000
117.0	0.000
117.5	0.000
118.0	0.000
118.5	0.000
119.0	0.000
119.5	0.000
120.0	0.000
120.5	0.000
121.0	0.000
121.5	0.000
122.0	0.000
122.5	0.000
123.0	0.000
123.5	0.000
124.0	0.000
124.5	0.000
125.0	0.000
125.5	0.000
126.0	0.000
126.5	0.000
127.0	0.000
127.5	0.000
128.0	0.000
128.5	0.000
129.0	0.000
129.5	0.000
130.0	0.000
130.5	0.000
131.0	0.000
131.5	0.000
132.0	0.000
132.5	0.000
133.0	0.000
133.5	0.000
134.0	0.000
134.5	0.000
135.0	0.000
135.5	0.000
136.0	0.000
136.5	0.000
137.0	0.000
137.5	0.000
138.0	0.000
138.5	0.000

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139.0	0.000
139.5	0.000
140.0	0.000
140.5	0.000
141.0	0.000
141.5	0.000
142.0	0.000
142.5	0.000
143.0	0.000
143.5	0.000
144.0	0.000
144.5	0.000
145.0	0.000
145.5	0.000
146.0	0.000
146.5	0.000
147.0	0.000
147.5	0.000
148.0	0.000
148.5	0.000
149.0	0.000
149.5	0.000
150.0	0.000
150.5	0.000
151.0	0.000
151.5	0.000
152.0	0.000
152.5	0.000
153.0	0.000
153.5	0.000
154.0	0.000
154.5	0.000
155.0	0.000
155.5	0.000
156.0	0.000
156.5	0.000
157.0	0.000
157.5	0.000
158.0	0.000
158.5	0.000
159.0	0.000
159.5	0.000
160.0	0.000
160.5	0.000
161.0	0.000
161.5	0.000
162.0	0.000
162.5	0.000
163.0	0.000
163.5	0.000
164.0	0.000
164.5	0.000
165.0	0.000
165.5	0.000
166.0	0.000
166.5	0.000

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**CANDELA TABULATION - (Cont.)**

167.0	0.000
167.5	0.000
168.0	0.000
168.5	0.000
169.0	0.000
169.5	0.000
170.0	0.000
170.5	0.000
171.0	0.000
171.5	0.000
172.0	0.000
172.5	0.000
173.0	0.000
173.5	0.000
174.0	0.000
174.5	0.000
175.0	0.000
175.5	0.000
176.0	0.000
176.5	0.000
177.0	0.000
177.5	0.000
178.0	0.000
178.5	0.000
179.0	0.000
179.5	0.000
180.0	0.000



**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 8CR-TL-L15-840-EM10W-XXX-DIM-UNV-OM-CS-XX\_ EM MODE ONLY.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	550.09	N.A.	50.50
0-30	906.42	N.A.	83.20
0-40	1057.2	N.A.	97.00
0-60	1086.84	N.A.	99.70
0-80	1089.82	N.A.	100.00
0-90	1089.99	N.A.	100.00
10-90	899.93	N.A.	82.60
20-40	507.11	N.A.	46.50
20-50	529.46	N.A.	48.60
40-70	31.91	N.A.	2.90
60-80	2.98	N.A.	0.30
70-80	0.71	N.A.	0.10
80-90	0.17	N.A.	0.00
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1089.99	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	190.06
10-20	360.03
20-30	356.33
30-40	150.78
40-50	22.35
50-60	7.28
60-70	2.28
70-80	0.71
80-90	0.17
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	114	112	109	107	112	109	107	106	105	104	102	102	100	99	98	97	96	95
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	92	91	89
3	104	99	94	91	103	97	93	90	95	91	89	92	90	87	90	88	86	84
4	100	93	88	84	98	92	88	84	90	86	83	88	85	82	86	83	81	80
5	96	88	83	79	94	87	82	79	86	81	78	84	80	77	82	79	77	75
6	92	84	78	75	90	83	78	74	81	77	74	80	76	73	79	75	73	72
7	88	80	74	70	87	79	74	70	78	73	70	77	73	70	75	72	69	68
8	84	76	70	67	83	75	70	67	74	70	66	73	69	66	72	69	66	65
9	81	72	67	63	80	72	67	63	71	66	63	70	66	63	69	65	63	62
10	78	69	64	60	77	69	64	60	68	63	60	67	63	60	66	63	60	59

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## UGR TABLE - CORRECTED

### Reflectances

Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

### Room Size UGR Viewed Crosswise

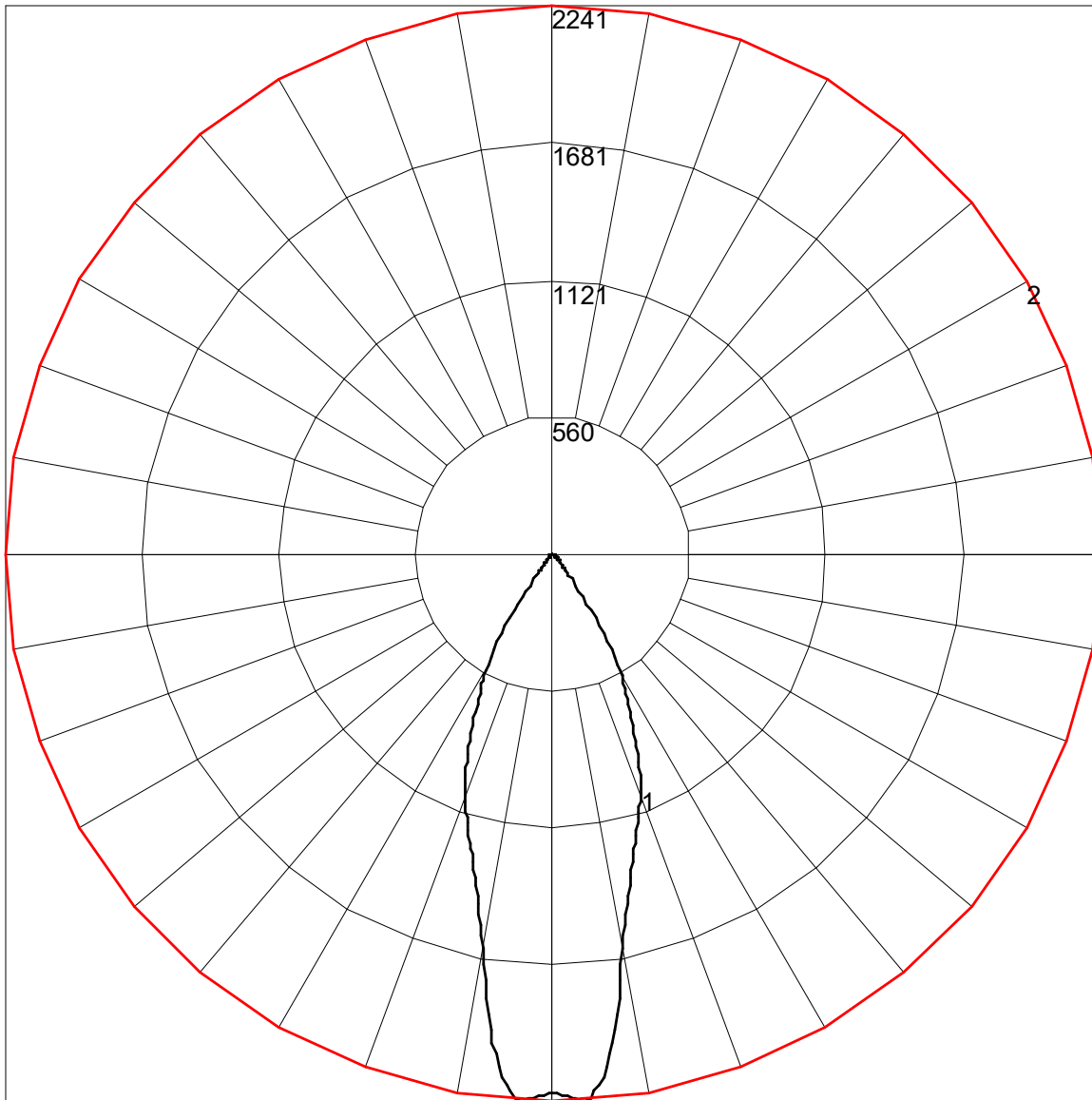
X=2H	Y=2H	0.4	0.4	0.4	0.4	0.4	UGR Viewed Endwise				
	3H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	4H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	6H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	8H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	12H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
4H	2H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	3H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	4H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	6H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	8H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	12H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
8H	4H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	6H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	8H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	12H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
12H	4H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	6H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	8H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4

Maximum UGR = 0.4

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## POLAR GRAPH



Maximum Candela = 2241.014 Located At Horizontal Angle = 0, Vertical Angle = 3.5

# 1 - Vertical Plane Through Horizontal Angles (90 - 270)

# 2 - Horizontal Cone Through Vertical Angle (3.5) (Through Max. Cd.)